

Still \$1.50

AUGUST 1987



A CO-OPERATIVE PUBLICATION OF THESE ATARI CLUBS:
C.H.A.O.S. (LANSING) G.A.G. (FLINT)
T.A.G. (SAGINAW) BAY CITY / MIDLAND
B.K.A.U.G. (BATTLE CREEK) W.A.U.G. (ANN ARBOR)
G.K.A.U.G. (KALAMAZOO) G.R.A.S.S. (GRAND RAPIDS)

Atari News

... and COMMENT,
Compiled by John Nagy

BIGGEST NEWS: The ATARI MAGIC SHOW, August 28-29-30 at the SOUTHFIELD HILTON HOTEL, just outside of Detroit. This is the FIRST 3-day ATARIFEST, and the ONLY midwest appearance of this hobbyist's delight that you have read so much about all over the rest of the country. DON'T MISS THIS ONE. Full details are on PAGE 12 inside this issue of MAM. Come and help cheer for the new ATARI products (if they are there) or jeer the ATARI reps (if they come only with excuses)!

More on those elusive products: Neil Harris, in a copyrighted release through GENie telecommunication systems, says the MEGA (with BLITTER) and the 1200 baud modem are both in final pre-production test, only days away from full production. He says the MODEM has the ugliest box he has ever seen... but then, most of us don't keep the box as an object d'art. The PC is looking like LATE SUMMER. The XEP-80 (80 column driver for the 8-bit) is AGAIN being delayed by parts availability problems, as is the \$1500 laser printer. Schedule on them is now "as soon as possible".

1030 EXPRESS Version 3 has been on CompuServe for several weeks. It is not available on BBS systems yet, because it is still in testing. Keith Ledbetter promises that the final version should be ready VERY SHORTLY, and will support the word-wrap, CRC, type-ahead window, and other great features of the 850 version. Be patient, it will be worth it! The EXPRESS! line of terminals are THE BEST for the 8-bit ATARI, BAR NONE. And they are FREE.

MORE EMULATORS APPEAR. You've been following the flack on Darek Mihocka's ST TRANSFORMER (800 emulator for the ST)? Of course you have.

How about another one? STEVE JONES, of Pennsylvania, has shoved his own version of an 8-bit emulator into a CART for the ST! While sound and some graphics modes are not supported yet, STEVE's version is estimated to run at 70% of the 8-bit speed, as opposed to 40-50% as in Darek's more complete TRANSFORMER. Like Darek's, the JONES version has printer and modem support, but even features AXLON-EMULATION to use the extra memory of the ST as RAMDISKS. STEVE runs "JONESWARE", and expects to market his cart like the MAGIC-SAC, where the user must supply his own ROM CHIPS to make the unit work. Price: around \$50, ready by this Christmas. No word on ATARI's view of this possible new entry into the emulation market. JONESWARE, BOX 7037, MECHANICSBURG, PA, 17055.

ATARI has made a big noise in the music industry with the MIDI port on the ST. Since it is the only computer that offers such an item BUILT IN, plus has all that POWER and only that PRICE, the ST has become the #1 computer of choice for musicians. Musicians? Yes, the computer is becoming so integral to modern music making, that MANY music stores now carry COMPUTER SOFTWARE, and YES, ATARI ST computers!

ATARI was the first computer manufacturer to go to the NATIONAL ASSOCIATION OF MUSIC MERCHANTS show, and was swamped by hopeful vendors. Who needs to dig between toys to buy ATARI computers anymore... just look between the GUITARS and the DRUMS.

ANTIC MAGAZINE is looking for FREELANCE WRITERS for reviews of 8-bit adventure and role-play games. They want to see samples of your writing and evidence that you are an advanced gamer. Contact them at 544 Second Street, San Francisco, CA 94107. Meantime, submit your hopeful material HERE, and become a "published" author!



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Publisher's Note

by JOHN NAGY
(517) 487-5646

Editors:

Rich and Judy Barnes (517) 349-0404

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Another month, late, but catching up nicely!
Our objective is to be on schedule in order to have fresh copies of the SEPTEMBER issue of MAM at the MAGIC ATARIFEST in Southfield at the end of August. I expect to spend a good part of the weekend both at the show in general and at the C.H.A.O.S. table, where I will also have a big display of MAM back issues (available for pennies on the dollar!). I also hope to organize a seminar for the newsletter folks of C.A.C.E. (Jackson), W.A.U.G. (Ann Arbor), M.A.C.E. (Detroit), as well as MAGIC, to discuss more ways to co-operate in production of top quality newsletters for our clubs. Then, expect FULL coverage with PICTURES YOU CAN REALLY SEE in the OCTOBER issue of MAM.

Last month's attempt to bring you CES coverage photos WAS less than a roaring success, wasn't it. OK, now we know the lower limit of our print medium, and it has to be up from here. Preparing photos for print costs money, and we tried an alternative that was free... and we got what we paid for. Not again.

"THE INCREDIBLE SHRINKING NEWSLETTER" struck again this month, with the summer nearly crushing the clubs and the vendors into the sand... Nobody is writing, nobody is buying, nobody is meeting... no ads, no contributions equals small MAM. Still, this month the feature section begins on page 12, bringing you almost 16 pages of new feature material in addition to the club pages. Not a bad haul, overall, and advertisers and writers alike promise a big push this fall.

SPEAKING OF ADS, as we gain experience with the system of printing this co-operative newsletter, we have found that we are now able to offer the clubs a FULL 50/50 split of the proceeds on all ads sold and maintained by the clubs. The math is easier (it was 60/40 before) and the incentive is higher than ever for all the clubs to get rolling this fall with advertisers. Think BIG, think NATIONAL, and save money for your club while contributing to one of the country's most re-printed and quoted club publications - MICHIGAN ATARI MAGAZINE.

MICHIGAN ATARI MAGAZINE is an independent newsletter published by the Capitol Hill Atari Owner's Society and is not affiliated in any way with Atari Corporation. Atari, the Fuji symbol and the names of various Atari computer equipment are trademarks of Atari Corporation.

This publication is the official newsletter of several independent groups of Atari 8-bit and 16-bit computer users. It is intended for the information and education of their members as well as the dissemination of Atari related information. Opinions expressed in this publication are those of the respective author and are not in any way official opinions of the associated user groups.

Other non-commercial USER GROUPS are granted permission to reprint articles from this magazine provided credit is given to the respective author as well as to the Mid-Michigan Atari Magazine. Most original files are available from the C.H.A.O.S. BBS upon request.

ZMAGAZINE, a weekly online-newsletter published (for free) by RON KOVACS of NEW JERSEY, has had some rough sailing of late. You read a few moths back of difficulties with CompuServe... well, they weren't entirely resolved, and may never be. He has privately told me that he



seriously wonders if he should bother doing ZMAG at all anymore, considering the personal expense, work, hassles, even hints of lawsuits.

Ron republished an update on expected delivery dates of new ATARI products that ATARI CORP posted through the GENie telecomputer network. Says Ron: "Due to a copyright notice in the Atari News column, CompuServe could not allow us to post it. We even asked Mr. Neil Harris for the official response about the matter, and we were told that we could not upload the text to CompuServe because the article stated for use by GENie members, etc. Since ISSUE #50, we have been encountering many problems. From the ST-Transformer articles, to the GENie Services sign-on information, on to the Analog Copyright notice, and now another with Atari's copyright on their news."

To fill you in, recently Ron reprinted what appeared to be a freely traded article that in fact was offered by ANALOG MAGAZINE (without any copyright info attached) on the DELPHI network. ANALOG was not amused and quickly said so. Ron was caught in the middle, where the best of intentions won't buy coffee.

Ron is also referring to CONSIDERABLE resistance (read: censorship) that he encountered from CompuServe SYSOP MIKE SHOENBACH when Ron helped start the flood of public sentiment about the ST TRANSFORMER (800 emulator for the ST). Mike didn't like MY original article, refused to post it on his own judgement that it "must be false", then accosted Ron for reprinting it in ZMAG, threatening to drop ZMAG if Ron followed up on what ultimately became the User Group Coup of the year.

Chief ATARI SIG man, RON LUKS, tried to patch things up with Ron and ZMAGAZINE, offering to see what kind of special privileges and access areas could be extended to Ron and his contributors. Things looked better for a while, then LUKS sorta dropped out of the picture at COMPUSERVE, leaving MIKE in charge, and the old friction was back. Late postings, complaints about ANY reference to other telecom services, ZMAG BBS outlet lists, etc.

Despite it all, Ron Kovacs has now started ZMAG-ST, a twice-a-month specialty issue in addition to the regular wide-appeal weekly ZMAG. Newsletters all over the country reprint articles from ZMAG, and I for one would hate to be without it. (ZMAG and ZMAG-ST appear on many of the MAM club bulletin boards.)

Let's both give RON a big hand for remarkable effort (all for no personal gain), and encourage him to weather the current storms. We NEED both ZMAG and the dedication to ATARI user support that it voices every week.



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NEW 8-BIT TITLES

AREALITY: THE DUNGEON \$28.95
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- 1) Purchase BDCK
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MARS SBDCK Contest. Winner(s) will receive a FREE disk of all of the qualifying entries, plus choice of our official MARS T-SHIRT or Atari poster collection
 - 5) Other entrants will receive a 50% discount on our SBDCK Screen disk #2 (the compilation of screens from this contest)
 - 6) Contest is for the ATARI 8-BIT version only. Coming soon: an ST contest. #
 - 7) And a random drawing will occur for all participants involved for some goodies of our choice. Who knows, maybe you will win - but only if you enter.
 - 8) Deadline is Nov. 15, 1987. Please send your screen(s) to the above address in care of: **MARS BDCK CONTEST.**
- ~~~~~
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C.H.A.O.S. is the CAPITOL HILL ATARI OWNER'S SOCIETY, serving the ATARI community of the Lansing, Michigan area. The CAMPUS HILL ATARI OWNER'S SOCIETY is the Michigan State University chapter of C.H.A.O.S.

Membership dues are \$12.00 per year and entitle the member to a 1 year subscription to the Michigan Atari Magazine, a free disk from our regular library, access to our other libraries and facilities, as well as access to our other resources. Dues may be paid at any C.H.A.O.S. meeting or by mail. If not using an official Membership Application, please include your Name, Address, Phone and a list of your equipment and interests.

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P.O. Box 16132  
Lansing, MI 48901

General meetings of the membership take place several times a year. 8-bit and 16-bit Special Interest Group meetings take place monthly. S.T.I.N.G. (S.T. Interest Group), for Atari ST owners, meets on the SECOND Saturday of the month. The 8-bit SIG Atari, for 400/800, and XL/XE owners, takes place on the THIRD Saturday of the month. The meetings take place at the MSU Physics-Astronomy Building, Physics Road, Room 118. Meetings begin at 10:00 am sharp and last until 1:00 pm. Members and guests are welcome to any SIG meeting that interests them. To get to a meeting, take East Grand River to the Collingwood Entrance for MSU. The first available left turn is Physics Rd. The Physics-Astronomy Building is about 1 block from the corner, on the right hand side. Park in the gated lot just past the building.

Illegal copying, or any violation of copyright laws, is not condoned or allowed at any C.H.A.O.S. sponsored function, including the club BBS.

## ELECTED AND APPOINTED OFFICERS OF CHAOS

| Position         | Name             | Phone #  |
|------------------|------------------|----------|
| President        | Leo Sell         | 349-0404 |
| Vice President   | John Baker       | 641-4430 |
| Sec'y-Treasur.   | Gary Ferris      | 393-2593 |
| 8-bit Rep        | Marvin Goldstein | 332-4160 |
| 16-bit Rep       | John Johnson     | 355-4219 |
| Membership       | Gary Ferris      | 393-2593 |
| Library Mgr.     | John Baker       | 641-4430 |
| ST Librarian     | Sally Nagy       | 484-1976 |
| XL/XE Librarian. | Bill Johnson     | 675-7166 |
| Publ. Librarian. | Richard Evans    | 351-2381 |
| ST Publ. Libr.   | Chet Kapusinski  | 676-4539 |
| XL/XE SIG Cor.   | Guy Hurt         | 484-7675 |
| ST SIG Coordn.   | Brian Goluska    | 332-4415 |
| BBS Sysop        | John Nagy        | 487-5646 |
| BBS Librarian    | John Lewis       | 339-1793 |
| Newsltr Editor   | Rich Barnes      | 349-0513 |
| Advertising      | Jeff Bone        | 321-5510 |

## Presidential Address

Pres Sez  
Leo Sell

Where never is heard,  
A discouraging word,  
La la laaaa, la la la la la laaaaaa.

Not the theme song of Atari users anymore is it... There is a definite pall over the attitudes of Atari users, 8-bit in particular.

I think this attitude is part of the reason for the decline in user group membership all over the country. People get discouraged, think they have a non-supported, or obsolete product, and drop out or move on. WRONG ANSWER. While the technology is obsolete, what about the utility of the system. Does it still do what you want to do with a computer? Often the answer is yes. Find a better reason than obsolescence to drop it or upgrade.

How about non-support? The last thing you should do is drop out or get less involved when the manufacturer of your system, and the software companies begin to drop support. On

the contrary, the support responsibility is now entirely yours and the best way to meet the responsibility is to be involved in a user group. NO ONE ELSE can help. A user group such as ours has always been the best support you can have. Now it may be the most as well.

Resolve to get more involved with your Atari by redoubling your efforts and involvement in CHAOS. I guarantee you'll be more satisfied than ever before.



## Meeting Minutes

EIGHT BIT MEETING--  
Reported by GUY HURT

There seems to be an inverse proportional relationship between the temperature and meeting attendance. As typical for this time of year, we had a sparse crowd on hand, but we had our usual full agenda.

Our general discussion covered such topics as the cancellation of the Chicago CES, and the upcoming Magic Computer Show, slated for the last weekend in August, in Southfield.

Lee Kronenberg demoed a hardwired numeric keypad, capable of working with anything, and without a "handler".

In honor of one year of this fine publication, I gave a brief history on CHAOS newsletters.

Bill Johnson gave an extensive demo of our disk of the month, which contained the game 'Star Lords'.

And finally, I gave a presentation on how to write good educational programs.

Next time, I'll be showing portions of a video tape that I recently received from WACO. The tape will demonstrate several 8-bit programs running on an ST, courtesy of the ST Emulator. Hope to see you in August. Until then, happy computing!

JULY ST-UTTERINGS  
by Brian Goluska

The ST special interest group of CHAOS meets the 2nd Saturday of each month, at the Physics-Astronomy building of MSU. See the CHAOS title page for directions.

Once again, on a hot, hot day, I wondered whether anyone would show up for the CHAOS ST meeting. But 18 people showed up, again one more than last month. While we always get a

few who don't yet own an ST, this meeting had mostly ST owners. Sally Nagy did much of the demoing, showing new public domain software in the library. Among many other programs, she showed the "Atari - Power without the Price" demo, a space shuttle demo (that seemed to run itself), and a preview of Dungeon Master, soon to be released by FIL. The graphics of Dungeon Master were very nice, I hope the game is as good. Seems that a non-playable demonstration version of software is becoming a routine form of advertising.

Some talk discussed ST hardware reliability. A member with 3 ST's had 2 problems in a month, one monochrome monitor died, and one system unit. To me (a two ST person), this was maybe bad luck. The most common problem that I know of, the "loose chips on old ST's", is easily solved by opening the case and pressing down on all the socketed chips (and I've never had to do this on my 1040, only my very early 520). And, of course, I carefully throw my ST's in the trunk of my car once a week, which can't be the best environment for any computer. Has anybody else had an ST monitor give up the ghost?

Next meeting (August) will have a demo of firstCADD, a 2D drafting and design package for the ST. Also DBASIC from DTACK, which touts itself as the greatest. We'll see, and report next month.



## Disk Library

ST LIBRARY  
By Sally Nagy

More new disks for all. This month there are disks only for monochrome users. UTILITIES C11, with Joshua, TI59, Address, Monitor Mod text file, and ; Graphic Display #7 with demos featuring Bananas, Pics, and more.

Other disks available are: Graphic Display #8-10 -- featuring demos of commercial games (Wander, Airball, KarateII, Aliants) and other fun things. Like a new Amiga emulator.

Sound/Music #6 -- More Music Studio songs and Musiccomm. Find a friend with a modem and try this out.

Utilities B12 -- The disk is arced full of GFA BASIC tips and utility files. One helping you gain control of Dialog Boxes.

Utilities C12-13 -- More basic utilities. Twister a disk formater, printer set up files, Dvorak accessory, and more.



A complete listing of files on these disks will be available at the next STING meeting. Hope to see you there!

Disks are available to members at CHAOS meetings for \$5.00, or by mail. Discounts include 5 disks for \$20.00, and any 50 for \$125.00. As always the ST Library can be rented a MONTH for only \$65. Contact John Baker by phone at (517)641-4430.

## Telecom

THE CHAOS DOWNLOAD  
by John Nagy

The heat STAYED ON, and so did the CHAOS BBS, logging the busiest summer in years. New users from BERLIN (Germany) and COBAR (Australia) have kept things interesting too.

The most popular new feature on the system is certainly "BLACKJACK". Now playable online (with a cheating dealer!), you can bet your TIME instead of money. Press "\*" (asterisk) and you're in, and can bet any portion of your access time for the current call. Accumulate BONUS TIME or lose it all... it's all good fun.

About that dealer... I hope to have him (her?) on the straight and narrow shortly. It seems the house is not allowing Aces to be ONE or TEN at YOUR discretion, plus it won't take its hits if it thinks it has already got you beaten... oh well. I doubt we will be able to get it so patched up that you will be able to double down, count cards, etc... but who knows?

We REALLY need some good BBS LISTS for ATARI BBS's in MICHIGAN and all over the US. World, even. If you have some recent and complete-ish lists, please upload them as soon as possible!

Also new online at the CHAOS BBS and hundreds of others nation wide is ZMAGAZINE-ST. Supplementing the original ZMAG, this one is formatted in 80 columns and is all of specific interest to ST owners. Like ZMAG, it runs about 20-30K, so be prepared for lots of news and general info, but EVERY OTHER WEEK. ZMAG continues as a weekly. I am trying to get more feedback from users regarding the ZMAGs... although we get a fair amount of articles through ZMAG that we reprint here in MAM, I need to know if enough of you want us to keep ZMAG online. Readership has declined of late, and we need to know why.

Til next month, SEE YA IN CHAT! The CHAOS BBS, (517) 371-1106 in Lansing.

## BITS AND PIECES

FROM THE

BATTLE CREEK ATARI USER GROUP

## Presidential Address

by Chuck Steele

Attention ST users, DBASIC is here. What is DBASIC? It is a new version of BASIC for the ST! Comes with an well written manual for the experianced Basic Programmer. It is from the DTACK Grounded Inc. If it is as good as they say it is, it might become the standard ST program language!??? Any how, to get your copy so you can check it out, call Joe Yeager.

For the XL and XE users we have TURBO BASIC. It has 22 new commands added to it and runs your Basic programs 3 to 4 times faster than the Atari Basic runs. To get really fast a Compiler Program will speed you programs to run up to 15 times faster!! We will be showing how to use TURBO BASIC at our September Meeting. The September Disk of the Month will have some Turbo stuff on it.

We will also be discussing Computer Aided Design (CAD) and some new developments in the field. Explaining how it works and where it is going. I think it will be an interesting meeting.

Last Spring a few of us got together for a short course on programing in BASIC. After the fact I learned that others would be interested in learning some programing. If you are interested in learning some programing, give me a call. Yes you too can become a hacker. Join us we are GOTO PRINT "have fun!!!"

As you may have read, Atari is or has come out with new Disk Drive and Modem for the 8-bit. We will be giving you a report at our Sept. Meeting. BE THERE or MISS OUT!!

Welcome new member James P. Cottingham!!

### B.C.A.U.G. OFFICERS

|             |                   |          |
|-------------|-------------------|----------|
| President   | Chuck Steele      | 964-1701 |
| Treasurer   | Josephine Yeager  | 968-8401 |
| Member/News | Tom Siemietkowski | 963-4475 |
| Librarian   | Todd Harris       |          |
|             | Dan Egan          | 962-2549 |
| Secretary   | Mike Engle        |          |



## GRAND RAPIDS ATARI SYSTEMS SUPPORTERS

G.R.A.S.S. is on summer break.

No Meeting in AUGUST, join us again in SEPTEMBER, when we resume meeting at the WYOMING LIBRARY, 3350 Michael S.W., on the first Wednesday of each month. The Informal meeting begins at 6:30 PM, with the formal meeting starting at 8 PM.

President: Ron Fargo  
Treasurer: George Nosky  
Secretary: Chuck Baughman

|||||

→ → → → → → → → → →



## WASHTENAW ATARI USERS' GROUP



NO MEETINGS PLANNED FOR JULY & AUGUST  
SEPT 8 TOPIC ANNOUNCED IN SUMMER NEWSLETTER

NO MEETING IN AUGUST! Next meeting SEPTEMBER 8, at WINES SCHOOL unless otherwise notified. The "permanent" meeting place may be changed due to expenses and convenience. Investigation of locations at Eastern Michigan University and the University of Michigan is in progress.

WAUG has a reserved spot in the ATARI MAGIC SHOW, the ATARIFEST at the Southfield Hilton Hotel, August 28-30. Come and see us and ALL the world of ATARI!

### HOW TO JOIN WAUG

Come to a meeting. WAUG memberships are \$10.00 for 10 meetings. Renewals are \$5.00. WAUG members receive a mailed copy of our newsletter each month and are able to buy disks for \$2.00 from our 8-Bit disk library (\$5.00 for our new ST library).

### HOW TO CONTACT WAUG !!!

TREASURE CHEST BBS: 313-439-2816 (1200/300)  
CLEAR THINKING BBS: 313-761-2444 (1200/300)  
MOLIN'S DEN BBS: 313-420-0407 (1200/300)  
By Mail: 39 W. Main #6, Milan, MI 48160



## GREATER KALAMAZOO ATARI USERS GROUP

## Presidential Address

by DANIEL YOUNGS

No meeting this month, so I can't give a report on what we discussed. But there are a few things that need to be brought to your attention. They are:

The BBS is up and running!!! Can you believe it! I thought we would never get it up. A special thanks to Frank for all the work he has put into it. The number is 616-657-2665 all callers are welcome.

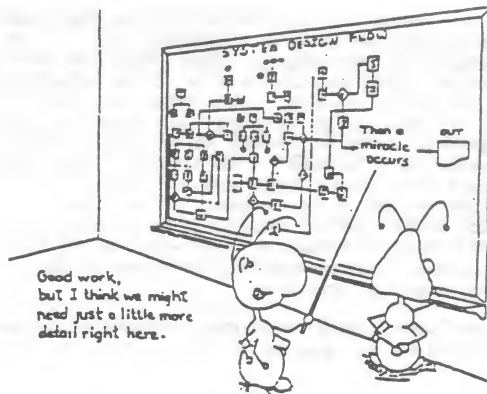
As most of you know the Chicago Trip has been called, so we aren't going. But there is going to be one in Detroit. I can't make it, but if anyone wants to car pool over, watch the BBS for more info.

We need to get all the dues paid up as soon as we can and we needed to get new people signed up (we now have a BBS to pay for). If you need a copy of the news letter to give to someone, let me know, I have some extra copies.

We will not have a meeting in August, but will start again in September.

The library has been traded, so we now have about double the programs we had before. Watch for this in September.

That's it for this month. Call the BBS for the latest news.







## TRI-CITY ATARI GROUP

### T.A.G. - SAGINAW, BAY CITY, MIDLAND

#### NEXT MEETING

The Tri-City Atari Users Group meets the second Saturday of every month at 2:00 pm at the Rudy Zauel Memorial Library on the corner of Shattuck and Center in Saginaw. Upcoming meetings are scheduled as follows:

August 8th at 2:00 pm.  
September 12th at 2:00 pm.

#### OFFICERS of TAG are as follows:

|                 |                     |          |
|-----------------|---------------------|----------|
| LeRoy Valley    | President           | 686-6796 |
| Marty Schmidt   | Treasurer/Sec.      | 792-6029 |
| Al Jennings     | 8-bit Disk Lib.     | 790-1980 |
| Lance Middleton | ST Disk Librarian   |          |
| Ron Hoffman     | Assis. ST Disk Lib. |          |

Club dues are \$20.00 per year. For this fee you get the Michigan Atari Magazine, support for both the 8-bits and the ST's, and full access to the club's public domain library. We currently have about 90 disks in the 8-bit library and 30 in the ST library. You can get copies of these disks AT NO CHARGE if you bring your own disk to copy on (time permitting) at the regular meeting. If you don't have a disk with you, you can get the 8-bit disks for \$1.00 each and the ST disks for \$2.00 each. Non-TAG members can get copies of the 8-bit disks for \$2.00 each and the ST disks for \$4.00 each. If you need to renew, do it now! If you haven't joined yet, then do it now!

## Presidential Address

Due to problems with summer vacations during the summer months, none of us received our July newsletters until the end of July. Chances are good that this issue (August) will not reach you in time for the August meeting. I've talked to John Nagy about it, and he says that we should be back on track by September -- he also apologizes for the inconvenience.

June was our normal month to hold elections. It didn't happen (due to no meeting), and we moved it back to July, and since the turnout was light due to the late newsletter we will now hold elections in August. All offices are open for anyone who wishes to run. The offices for TAG are:

President  
Secretary/Treasurer  
8-bit Disk Librarian  
ST Disk Librarian  
Editor

In particular, we are looking for a new ST disk librarian, as Lance now has other commitments, and an Editor for the newsletter. The Editor would be responsible for writing the Hot Flashes and Relics to Relish and for organizing the newsletter (I would still supply the Presidential Address (if I'm still president after elections) and the ST Notes column). If you feel that you have something to contribute, please volunteer yourself. Remember, things get done better if you do them yourself!

Also, anyone interested in writing a regular 8-bit column (you need a modem to transfer it to the Editor) please feel free to volunteer.

#### HOT FLASHES FROM THE FUTURE!

The hot month of August brings some HOT! public domain software to the TAG meeting. We'll be showing off several PD programs for both the 8-bits and the ST's, and everything that is shown will be available at the meeting on a special disk called (appropriately) the HOT AUGUST BYTE.

This disk is meant to be a surprise, so I won't leak out actual titles. However, on the 8-bit side look for a dynamite game and a special type of labeler, and for the ST's we'll have some great hard disk utilities and some fantastic games!

We will raffle off News Station this month...no matter what! I simply forgot to raffle it off

at the last meeting. Show up and win this great package for the 8-bit.

If you'd like to see an ST running IBM software, show up at the September meeting. I just purchased PC-Ditto, and it seems to work great! Look for a review in the next issue of MAM. So far it runs everything but IBM basic (none of the clones run IBM basic either).

## Meeting Minutes

### RELICS TO RELISH

The meeting started out with a lot of talk about the upcoming Atari Magic Show to be held at the Southfield Hilton on August 28, 29, and 30th. I'm planning to go down on Saturday, the 29th, but my car is already full, so if you want to go, contact other people in the club and make plans. Better yet, make plans at the August meeting!

We talked about changing our current meeting time from 2:00 pm to 11:00 am (still on the second Saturday). Everybody should think about this and voice their opinions, because we'll be making a decision at the September meeting!

Al Jennings then demoed his 1050 Happy drive and it's backup capabilities. He says that he has yet to find a program that it won't backup. In addition to letting you back up all of your hard earned software, you get the side benefit of true double density on the 1050 drive. Happy computers also supplies you with the capability to make a "compacted" disk. This allows you to put multiple protected programs on one disk for easy archiving. You also get the DOS XL Warp speed dos by OSS. Let me tell you, you've never heard a 1050 run so fast before! A Happy enhancement is a hardware add-on for the 1050 disk drive and costs about \$125.

The next program that Al demoed was Chipmunk, a program that actually removes protection...and it really works! The program can only back up software that is on it's menu, but the list includes about 90-95% of all protected software ever written for the 8-bits. Once a backup is made, you can copy the backup with a standard sector editor. The real beauty of this program is that it works on any drive! Chipmunk retails for \$40.

LeRoy Valley then demoed Procopy 1.40 and ST Copy 3.0 for the ST. Currently Procopy is the only backup program that can backup a protected double sided disk. It can also copy individual tracks on a disk. This allows you to move protected software from a single sided disk to

a double sided disk. LeRoy demonstrated the process of converting a single sided protected disk to a double sided disk. Although Procopy is not GEM based, it is very easy to run using the function keys and, most importantly, it works!

ST Copy 3.0 is GEM based and is very easy to run, but it can't back up a double sided protected disk and it can't back up an individual track. It also can't back up any of the newer software like Gold Runner, Karate Kid II, and Arctic Fox.

After the demos LeRoy showed off several new PD programs, and made copies for members present.

### 8-bit Equipment Volunteers:

Ted Beauchamp Computer and drive  
Marty Schmidt Monitor

### ST Equipment Volunteers:

LeRoy Valley Monitor & Hard drive  
Marty Schmidt 1040 ST

Once again, a big THANKS to all of you who loan your equipment to the club. PLEASE, if you're scheduled to bring equipment and you're going to be late, or can't make it, CALL ME!! It's not fair to the rest of the people when there's no monitor, or drive for the system!

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**MICHIGAN ATARI MAGAZINE**

**10 AUGUST 1987**



# GENESEE ATARI GROUP



## Editor's Note

Presidential Mumbblings for August  
by Jim Steele

Welcome to the GAG section for August. Longtime members will remember that there is no meeting scheduled, so we'll see you in September. Have a great summer vacation.

If you just have to have an Atari fix, the Atari Magic show is August 28-30 at the Southfield Hilton. At-the-door tickets are \$5 per day or \$10 for all 3 days. We are sort of unofficial co-sponsors of the show. So let's have as many GAG members there as possible.

We are still looking for volunteers to act as gofers and other such jobs around the show. As a volunteer you get your admission free. Can't beat that deal! If you're interested, contact Jerry Cross on the FACTS BBS (313-736-3920) or by phone at 313-736-4544. We definitely can use the help. Not just GAG members either, all volunteers are welcome.

Speaking of help, I notice that the newsletter is getting a little thin here in the GAG section. I've ran out of things to say over the past 3 years as GAG el Presidente. Cynics will probably note that you can't "run out" of something you never had, but what do they know? What I'm asking for is some more input from you. Fame! Glory! Write an article...

Till next time, Jim  
Next Meetings:

August- No Meetings scheduled  
September 9, 6:30pm Neithercut  
September 26, 10am National Computer Clinic

JIL JIL JIL JIL JIL JIL JIL JIL JIL

Library Non-news for August  
by Jim Steele

Well, since we're not meeting this month, there are no new disks to add to the vast collection. Jerry tells me that he has boxes full of disks obtained from other clubs. Sorting through these will no doubt provide some good stuff in the coming months. And knowing Gil, I'm sure he's got some goodies in store for you ST fans.

What? another format, department.

Just what you needed, right? Well, this one is a good idea. The folk at CompuServe have come up with a new graphics standard called GIF - the "Graphic Interchange Format". With Degas, Neo, Tiny, IFF and who knows what, who needs another, eh? GIF does have a couple of things going for it. First off, it compresses the data and does a better job than ARC. That saves time and disk space.

The real handy feature is the support for many different computers. Naturally CompuServe is not going to limit their service to just one system. They intend GIF to be the color version of the monochrome "RLE" format they've used for years. GIF supports the ST, Amiga, Apple GS, IBM, and Macintosh. By supporting many computers, the art collector has access to more files. We can all benefit by sharing those digitized playmates. (That's a satirical plea for more original art.)

At present, it doesn't look like the 8-bit machines will be able to use GIF. There's just not the resolution there. Maybe something with a scrolling display list and DLI's? Hey Atari, how about an upgrade to the XL like Apple's GS upgrade to the ancient IIe.

Genesee Atari Group is a non profit group of Atari users in and around Flint, Michigan. GAG dues are \$15 per year. Membership includes access to our disk libraries, print libraries, and our newsletter (currently included in this publication). Contact:  
Genesee Atari Group c/o Jim Steele  
4711 Drummond Square, Flint, MI 48504

# //////FEATURE SECTION\\\\\\\\

## Atari News

### The Atari-Magic Show Update....

The Detroit Atari show is only a few weeks away. In case you've just returned from the moon, or were out of the country someplace working for the Contras, here is a little background on what's going on.

Atari has been co-hosting AtariFest shows around the country with local user groups. So far, over a dozen shows have been held in Dallas, Pittsburg, Buffalo, San Diego, and many more.

The idea behind these shows is to give Atari users a chance to talk directly to the people who design and manufacture Atari software and hardware. Also, there will be several local dealers selling Atari products, plus several area usergroups. This is your chance to catch up on all the latest news about upcoming products, and get an first-hand look at the new Atari products, such as the Mega-ST, Game Machine, Laser Printer, Modem, 80-column card, and much more.

Several software developers will also be on hand to discuss their products, and show off newly released programs. Planning to attend the show are Best Electronics, Mars Merchandising, QMI, Sector one, Atari Corp, Hybrid Arts, Michtron, Atari Explorer, ST Express, Alpha Systems, Astra Systems, Electronical Software, Riteway, Abacus, PCA, Chipmonk, Basic Bits and Bytes, and ICD. Over 30 vendors are expected to attend.

There will be a full schedule of seminars on such topics as desktop publishing, midi-music, programming, telecommunications, hardware, and much more! Guest speakers include Gordon Monnier and Timothy Purves (Michtron), Sandi Austin and Neil Harris (Atari), Frank Foster (Hybrid Arts), Tom Harker (ICD), and several more.

There will also be a MIDI music concert. Tom Synden of Peterson Music will be on hand to show what you can really do with an Atari ST, and to answer any questions you may have.

And don't forget to try your hand at the MIDI-MAZE contest! First prize will be a CASIO keyboard plus software, valued at over \$800! MIDI-MAZE is a multi-player, multi-computer maze game that will be played on 16 Atari ST computers! These contests have been held at other AtariFests, and were a great hit!

The Atari-Magic show will be held August 28-30 at the Southfield Hilton hotel, located on Nine Mile Rd. near Greenfield, in Southfield Michigan. Show times are:

|          |          |
|----------|----------|
| Friday   | 6pm-9pm  |
| Saturday | 10am-6pm |
| Sunday   | 11am-5pm |

Admission is \$5, or you can get a 3-day pass for \$10. Advance tickets can be obtained from your local user groups, or by mailing a check to:

The Atari Magic Show  
28111 Imperial Dr  
Warren, Mi. 48093

Advance tickets are \$4 and \$8.

If you would like further information, call the Magic Hotline (recording) at 313-751-8291 or the UserGroup Coordinator at 313-736-4544.



## Industry Report

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SANTA CLARA SHOW DEBUTS - "FINALIZED" ATARI  
LASER PRINTER - NEAR-BETA WORD PERFECT...&  
MORE  
BY NAT FRIEDLAND, ANTIC EDITOR  
6/21/87

With all the other Atari Fairs that took place during the past 12 months and the huge Consumer Electronics Show just weeks ago, it was surprising to find so much new to see last weekend during the hastily-organized World of Atari Faire at the year-old Santa Clara Convention Center.

But several unfamiliar companies with impressive ST software made their Atari Fair debuts last weekend. And a near-production version of the Atari SLM804 laser printer had its first public showing. This report concentrates on products that have not been reported on previously.

The Atari laser printer is smaller and lighter than most current models, but seems just about as fast and sharp. It was operating in Diablo 630 emulation with a 4Mb Mega ST running a pre-release version of the Microsoft Write word processor with a WYSIWYG display. The laser

controller board is in a modem-sized box cabled between the ST's high-speed Direct Memory Access (DMA) port and the printer. This controller box also has a second DMA port for connecting a hard disk.

This 300 dots-per-inch printer supports Atari's GDOS (which automatically uses the highest resolution available to a printing device). We picked up a selection of the sharp graphics and multi-font printouts that the Atari SLMB04 kept churning out throughout the day. Late summer or September is the current estimated market arrival for the Atari Desktop Publishing System.

At a neighboring booth, Word Perfect was showing a near-beta version of the forthcoming ST edition of its bestselling word processor. The GEM-based software, due in September, looked extremely fast and powerful. It will list at \$395 but is often discounted by more than 50% in the IBM version. The WP rep said that the company is working closely with Publishing Partner's developers to assure immediate desktop publishing compatibility for the word processor.

Programmers will love Omniware's new Edit/Booster, an ST text editor that also generates GEM code by mouse. Select "Draw A Circle" from a drop-down menu and the GEM code appears in your program. The version currently on sale just works with C, but updates for GFA BASIC, Personal Pascal and Modula-2 are promised soon. Omniware, based in Bellevue, Washington also showed a desk accessory controller for the widely used Hewlett-Packard Laserjet printer and an H-P terminal emulator.

Iliad Software of Orem, Utah, another new entry, showed a powerful, user-friendly CAD/drawing program, Athena II, selling for \$99.95. Athena requires a 1Mb ST, but functions in either color or monochrome. Coming soon is a circuit-testing simulation program called Circuit Maker. The company was also showing a multiuser, multitasking operating system, FDOS, which is similar to the system used on 68000-based VME workstations.

A wide-ranging product line of specialized business applications for the ST was shown by Hi-Tech Advisors of Winter Haven, Florida. Their \$199 titles included Church Manager, Service Station Manager, Video Store Manager, Inventory Pro and Sales Pro Plus. Mail Pro handles custom mailing lists and form letters for just \$69. SBT of Sausalito, California kicked off a line of dBASE III business accounting modules based on the ST's dBMAN clone.

Beckemeyer Development Tools of Oakland, California showed their latest addition, a touch-screen restaurant menu system. The demonstration model for a Chinese restaurant was almost frighteningly complete and efficient.

Two image scanners were shown at the fair. Navarone, of Sonoma, California had a \$1,239 ST system including the Canon IX-12 scanner. The simpler \$99.95 IMG Scan from Seymour-Radix of Irving, TX used a small box that tapes to the print head of any dot matrix printer that supports graphics.

Old-timer Lou Schwing of Astra Systems was gleefully demonstrating the ruggedness of his HD+ unit which combines an 20Mb hard disk and a double-sided ST 3.5" disk. The HD+ was notably cool and even kept operating as he waved it in the air and laid it on its side. DeskCart, a \$99.95 cartridge from Quantum Micro of Liverpool, New York is a real-time clock/calendar with a full set of Sidekick-type desk accessories including a filer, calculator, address book, notebook, macros, RAMdisk driver and other utilities. The cartridge format is claimed to save memory and operate faster.

The World of Atari was busy and profitable for most exhibitors throughout its Friday-Saturday run. The thriving Antic booth was showing upcoming ST graphics software from The Catalog -- Cyber Paint, a paint program that creates images for animation with Cybermate, and Spectrum 512, a smooth-lined, ultra-clear paint program that can display all the ST's 512 colors simultaneously.

## **ST Review**

REVIEW OF GFA BASIC  
By Sally Nagy

EVERYTHING IN CONVENTIONAL BASICS  
PLUS MUCH MUCH MORE.

How would you like a hundred plus new commands not found in ST BASIC? That's what GFA BASIC from Michtron has.

Commands create Alert boxes, make it possible to create and modify the menu bar and handle other menu selections.

GFA BASIC has new tricks for your Mouse: MOUSE, MOUSEX, MOUSEY, MOUSEK, HIDEM, SHOWM, and DEFMOUSE. These help you define the mouse form, choose a pre-existing one, hide or show the mouse, and show its location.

GFA BASIC has DPOKE, LPOKE, SPOKE, SDPOKE, SLPOKE, DPEEK, and LPEEK commands, besides POKE and PEEK that are found in ST BASIC. These commands write 1, 2, or 4 bytes into an area of memory beginning at a specified address... plus...

New graphic commands produce filled in shapes, PBOX, FCIRCLE, PELLIPSE, PRBOX.

You begin to get the picture?

GFA BASIC is no lazy basic! It loads and executes machine code programs (assembled programs) or compiled programs (compiled C programs) from disk by using it's high-speed Interpreter.

GFA BASIC'S user-friendly editor makes it easy to use the mouse or keyboard. At a glance, the editor's capacity to copy, move, save, and print block becomes evident. Like a word processor, Search and Replace String commands are also available.

Using only 55K of memory, GFA BASIC works with no line numbers with one command per line. Labels structure the program. All line commands are placed by the program's interpreter, some are indented according to their part of the function.

It's 297 page manual has a complete index of all commands displayed on two facing pages. One easy glance quickly locates further information.

Other sections list all the error messages found in BASIC, BOMBS, TOS and the EDITOR; and all the ASCII Codes.

And if that isn't slick enough, the GFA BASIC DISK, includes a READ.ME file updating the manual. The Interpreter, GFABASIC.PRG, and GFABASRO.PRG, "run only" program, which allows others without GFA BASIC to run the programs you develop. STKILL.BAS makes it possible to remove the line numbers from ST BASIC programs and split multi-line commands into one line commands. The transformed program loads into the editor with the MERGE option.

GFA BASIC works with either Color or Monochrome System. For best results use either High or Medium Resolutions.

#### OTHER COMMERCIAL PROGRAMS AVAILABLE SUPPORTING GFA BASIC

The GFA BASIC COMPILER converts your finished programs into compact, fast-running machine language files.

GFA VECTOR, 3-D graphics program.

And GFA DRAFT, graphics design.

#### REPORTED COMING SOON:

GFA CONSTRUCTION KIT, to create dialog boxes.

#### PUBLIC DOMAIN AND SHAREWARE SUPPORT FOR GFA BASIC:

The C.H.A.O.S St Library has 2 disks with GFA BASIC GAMES, A2 and D1; and 2 Utilities Disks that have tips on writing GFA BASIC programs and utilities, B7 and B12.



## Review Eight

Daisy Dot Near Letter Quality Emulation  
(for Star and Epson Printers)  
Reviewed by Warren Lieuallen  
(Reprinted from Fuji Facts)

I have had my Star SG-10 for nearly two years now, and am still very happy with it. It is a full-featured dot matrix printer, and performs every task I have requested of it. It even has a good quality near letter quality (NLQ) mode. Unfortunately, the NLQ character set is, in my opinion, "funny looking". I've always wished there was something I could do about it. Well, now there is.

Available from CompuServe and GEnie, Daisy Dot is a program written by Roy Goldman of Denver. Daisy Dot is written in compiled Turbo BASIC (also available in the ACEC Disk Library), which means that it will only work on the XL and XE models. It currently supports the Star Micronics and Epson printers. Most "Epson-compatible" printers will probably work as well.

Daisy Dot allows you to print any ASCII/ATASCII file, using the traditional "double pass" NLQ printing approach. This means that the printer will print a line of characters, then advance the paper a very small amount (1/144th of an inch), and print the line again, filling any gaps in the printed characters. The approach Daisy Dot takes differs however, in that the NLQ character set is not the one originally supplied with your printer, but one of your own choosing!

This program includes both the main file printing program, as well as a font editor, for creating your own custom character sets. Printing a file is very straightforward. The program prompts you for the font you would like to use (Daisy Dot is supplied with five different fonts. You can add on as many as you'd like), and then the file you'd like to print. You are then asked what density you



would like to print (four are supported), which will control not only the resolution, but also the number of possible columns on the page. Finally, you must decide how much space to leave between characters. Daisy Dot fonts are proportionally spaced (an "m" is much wider than an "i"), and can have from 8 to 28 columns of space between them. Following any necessary disk swapping, printing then proceeds.

The file that you are going to print must be properly formatted, however. A standard file saved with a word processor will not work. Instead, after saving the file, you must also "print" it to disk (thereby creating an ATASCII file with no printer control codes). Both PaperClip and AtariWriter Plus have this feature (the original AtariWriter does not, but this can be corrected with the ATWFM program from the ACEC Disk Library). It is this "printed" text file that Daisy Dot will actually print.

The font editor that is supplied is similar to many of the other Atari character set editors, in that by using the joystick, you draw each character on a grid on the screen. This editor is somewhat limited: you cannot see the character set on the screen, and many of the more sophisticated commands for moving columns and rows are missing. Nonetheless, it is quite adequate, especially considering that very few people will actually be creating a new character set. More likely, this editor will be used to slightly modify certain characters that you happen to think you can make better.

As an enhancement to the editor, an Atari character set conversion program is also available. Many of you are familiar with the custom character sets available for the Atari (the common, nine sector .FNT files). These files may now be converted into NEO Daisy Dot fonts. Once this is done, they usually require some editing, as Daisy Dot is capable of better resolution than the 8x8 Atari character matrix.

A separate version of the program is available for the Star SG-10, to compensate for the non-standard line spacing on this printer. The methods used to compensate for this difference are invisible to the user, and you can select to cancel them if you wish.

Thorough documentation is included with the programs, even though it really isn't needed. Both the printing and font editor programs are menu-driven, and are as easy to use as The Print Shop. These programs were very well thought-out and designed, and Mr. Goldman is to be congratulated.

In short, if you have a Star or Epson printer, you should have Daisy Dot. This elegant and powerful program expands the capabilities of

your printer, and will allow you to easily produce very good quality output.

(Publishers comment: I was very pleased with the performance of DAISY-DOT, so much so that we did extensive testing to see if it would be usable for MICHIGAN ATARI MAGAZINE. As it turned out, the best spacing and reductions left too much space between lines... So I contacted ROY GOLDMAN at his Utah home. Roy listened to the problem and volunteered to make a special version of DAISY DOT that allowed adjustable line spacing. Two days later he called to say it was ready! I have worked with it and we may in fact start using it next issue. It still requires a lot of extra work to use DAISY-DOT for a newsletter, since two extra stages must be added to the printing process, and any editing requires reloading the entire word processor and starting the print process over. Nevertheless, we will try it and see if you think the result is worth the effort.

Roy is a very young programmer, but has had several popular PUBLIC DOMAIN programs already.

One was his DETECT program that analyzed files to determine whether they were SCRUNCED, ARCDed, SQUISHED, etc. I expect that he has many more great programs to come from his fertile young mind... hes still in his MID TEENS! -John Nagy)



**ST**

ST NOTES  
by LeRoy Valley (TAG)

This month lets take a look at some great new PD software.

If you want a way of cataloging all of those disks AND you'd also like to print some disk labels from the stored database along the way, check out DISCAT by Matt Leber. First let me state that this is Shareware, not public domain! If you're really going to use it, send Mr. Leber a check for \$5. For another \$5, you can get the complete 2.0 version. A demo version of 2.0 is available on Genie and complete (but older) versions are also available.

This program reads the directory of the disk (Hard disks too!) and allows you to add descriptions for each file. You can tag files to appear on the disk labels (up to 33) and they get printed out on either 2.75" x 2.75" or 2.75" x 1.875" labels in condensed print. The disk number is also printed out at the top of the label. DISCAT can sort by filename, extension, or disk number. Version 2.0 allows



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# MICHIGAN ATARI MAGAZINE

17

**AUGUST 1987**

# Atari ST Technical

ST DISK DIRECTORIES  
Author Unknown  
(Found on a BBS...)

For those of you that have gone from the 8-bit ATARI computers to the 16-bit ATARI ST's, there have been many surprises for you in the past months. Among them is probably "What do I do with all of this extra memory.", or maybe "The graphics on this system sure are something," and one of my favorites, "That disk holds a lot of data." All of these statements are true for obvious reasons. For the longest time there was only 48K of ram available in the ATARI Systems, so jumping to 512K is a fantastic leap. The same holds true for the graphics capability of the new ATARI, by going to a monitor and improving the resolution, another big leap has been made. But, one of the most important improvements to me has been the disk storage. After using an ATARI 810 disk drive for several years, going to 360K per disk is great. Now, since I have that off my chest, I would like to go a little deeper and try to explain some of the differences in the way the ST disks (single sided) are handled. The ST disk is divided into 80 tracks (0 thru 79), 9 sectors per track (1 thru 9), and is written in QUAD density (512 bytes per sector).

When a disk is formatted, a Boot sector (track 0, sector 1), the File Allocation Tables (it starts at track 0, sector 2) and the Directory (it starts at track 1, sector 3) are established using all 18 sectors in the first two tracks. The remaining sectors (tracks 2 thru 79, sectors 1 thru 9) are initialized in pairs or by cluster (two sectors = one cluster). As a cluster is initialized the File Allocation Table (F.A.T.) is updated to indicate the status of the cluster; this continues until all 351 data clusters have been completed. If a cluster cannot be formatted or initialized, the corresponding entry in F.A.T. is marked not-available and will remain that way until the disk is re-formatted or thrown-away. If a cluster is marked as bad, the F.A.T. entry will contain a number between \$FF0 and \$FF7. That range of numbers simply means the cluster is unusable and will never be used to store data.

The ST disk uses track 2, sector 1 thru track 79, sector 9 to store any files you write to the disk. All filenames are listed on the disk directory in the order they are entered. The directory is seven (7) sectors long and has room for 112 entries, with each entry being 32 bytes in length. Each entry contains the

Filename and Extension, the file Attributes, the Time the last change was made to the file, the Date the last change was made to the file, the number of the first cluster in the file, and the length (in bytes) of the file. In addition, there are 10 bytes that have been reserved for future use (see fig.1).

Fig.1 ST Directory Fields

- 1) Filename 8 bytes bytes 0 thru 7
- 2) Filename Ext. 3 bytes bytes 8 thru 10
- 3) Attributes 1 byte byte 11
- 4) RESERVED 10 bytes bytes 12 thru 21
- 5) Time of Last Change 2 bytes bytes 22 and 23
- 6) Date of Last Change 2 bytes bytes 24 and 25
- 7) First Cluster Number 2 bytes bytes 26 and 27
- 8) File Size (in bytes) 4 bytes bytes 28 thru 31

The Filename and Extension are the first two fields in each entry of the directory. They take up the first 11 bytes of an entry and follow the same format as the ATARI 800 or the IBM PC, with one small exception. If the first character of an entry is \$E5, the file has been deleted and is no longer available for your use. If no changes have been made to the disk since the file was deleted, it may be possible to recover it by using one of the many sector editors available.

The Attributes field is one byte long and contains a number that indicates any special or unique characteristics about this entry. There are only five bits of the entry used on the floppies at this time, and they are listed in Fig. 2.

fig.2 Attributes

- Bit 0 - Read Only (not set if the file is Read-Write)
- Bit 1 - Hidden
- Bit 2 - System
- Bit 3 - Volume Label (Name assigned to the disk)
- Bit 4 - Sub-Directory (Folder Name)
- Bit 5 - Archive (This will be used on the Hard Disks)
- Bit 6 & 7 are not used at this time

The next field is marked RESERVED and is 10 bytes long. This field will be filled with 00's on all disk entries and no plans for its use are known at this time.

The Time of Last Change field is 2 bytes long and is updated each time you write to a file. This field contains the HOURS, MINUTES, and SECONDS(/2) of the last change to the file. This field is in the low-byte, high-byte format and uses all 16 bits. Starting with the highest bit, it uses 5 bits for the Hour, 6 bits for the Minutes and the last 5 bits for the Seconds. (The value in the seconds portion of the field must be multiplied by 2 to get the correct seconds count.)

The Date of Last Change field is handled almost the same as the previous field. This field is changed along with the Time of Last Change, and is also in the low-byte, high-byte format. Starting with the highest bit, use 7 bits for the Year, 4 bits for the Month, and the last 5 bits for the Day. Don't be to surprised when the year equals a 5 (as most files will) because the year stored has 1980 subtracted from it.

The First Cluster field contains the number of the first cluster used for the file. The cluster information is stored in high-byte, low-byte order and should never go above \$15F (351), since there are only 351 clusters.

The File Size field is a value equal to the number of bytes used in the file. This number divided by 1024 (1k) will tell you how many clusters are being used for the file (cluster \* 2 = sectors).

The File Allocation Table (F.A.T.) starts on track 0, sector 2, and may be the most important table on the disk. F.A.T. is used to keep track of the sector linkage for all data sectors. It is also used for files listed in Folders (sub-directories, see Attributes). The F.A.T. is five sectors long and is valuable enough to be have a duplicate table on the same disk. The location of the second F.A.T. is currently track 0, sector 7, but that is subject to change at any time.

The best way to think of the F.A.T. is like a puzzle. Each entry of the F.A.T. is 12 bits long (not bytes, bits), and the values range from \$000 to \$FFF (see fig.3). Byte 0 of F.A.T. tells what density the disk is formatted in (\$F7 is normal for byte \$00), and bytes 1 and 2 will \$FF as they are not used. The rest of the table is used as follows. (I'll be using the F.A.T. from the disk I have been working on for my examples. see fig.3) Before I begin I should point out that 12 bits per entry means that 2 entries equal 3 hex characters (bytes). We will start with bytes 03, 04, and 05 for our first 2 entries (see fig.3). Byte 03 will be bits 0 thru 7 of the first 12 bit entry, and bits 0 to 3 of byte 04 will be bits 8 thru 11 of the first entry. As you can see in the first example, the number is \$FFF. In F.A.T., if an entry contains \$FFB thru \$FFF it means the cluster is the last cluster of the file (EOF). Also, if an entry contains \$FF0 thru \$FF7 it means the cluster is not usable for some reason. Now, if you will return to byte 04, you will remember that we have only used 4 bits (0 to 3). Bits 4 thru 7 of byte 04 will become bits 0 thru 3 of the second entry and byte 05 will be used as bits 4 thru 11. This entry indicates that cluster 4 will be the next cluster for this file and it continues in that manner for the rest of the table.

Fig.3 (in hex) -- F.A.T. --

| 0  | 1  | 2  | 3  | 4  | 5  | 6+ | 7  | 8  | 9  | A  | B  | C  | D  | E  | F |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| 0  | F7 | FF | FF | FF | 4F | 00 | 05 | 60 | 00 | 07 | 80 | 00 | 09 | A0 |   |
| 00 | 08 | 10 | C0 | 00 | 0D | E0 | 00 | 0D | 00 | 01 | 11 | F0 | FF | 13 |   |
| 40 | 01 | 15 | 60 | 20 | 01 | 17 | F0 | FF | 19 | A0 | 01 | 18 | C0 | 01 |   |
| 1D | E0 | 01 | 1F | 00 | 02 | 30 | 21 | 20 | 02 | 23 | 40 | 02 | 25 | 60 |   |
| 02 | 27 | 80 | 02 | 29 | A0 | 02 | 28 |    |    |    |    |    |    |    |   |

Fig.4 Track & Sectors = CLUSTERS

BOOT SECT < FAT #1 > < FAT

|   |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|

#2 > < Disk Directory (7 Sectors) >

|   |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|

< CLU #2 > < CLU #3 > < CLU #4 > < CLU #5 > < CLU

|   |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.8 | 2.9 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|

#6 > < CLU #7 > < CLU #8 > < CLU #9 > < CLU #10 >

|   |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 | 3.9 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|

11 111/

< CLU #334 > < CLU #335 > < CLU #336 > < CLU #337 > < CLU

|   |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|
| 1 | 76.1 | 76.2 | 76.3 | 76.4 | 76.5 | 76.6 | 76.7 | 76.8 | 76.9 |
|---|------|------|------|------|------|------|------|------|------|

#338 > < CLU #339 > < CLU #340 > < CLU #341 > < CLU #342 >

|   |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|
| 1 | 77.1 | 77.2 | 77.3 | 77.4 | 77.5 | 77.6 | 77.7 | 77.8 | 77.9 |
|---|------|------|------|------|------|------|------|------|------|

< CLU #343 > < CLU #344 > < CLU #345 > < CLU #346 > < CLU

|   |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|
| 1 | 78.1 | 78.2 | 78.3 | 78.4 | 78.5 | 78.6 | 78.7 | 78.8 | 78.9 |
|---|------|------|------|------|------|------|------|------|------|

#347 > < CLU #348 > < CLU #349 > < CLU #350 > < CLU #351 >

|   |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|
| 1 | 79.1 | 79.2 | 79.3 | 79.4 | 79.5 | 79.6 | 79.7 | 79.8 | 79.9 |
|---|------|------|------|------|------|------|------|------|------|

Now you know what cluster to look at but maybe you want to know which track and sector that is. The quickest way I've come with is one of the following formulas,

a) To convert from Cluster to Track and Sectors:

$$(((\text{cluster \#} + 9) * 2) - 1) / 9 = \text{track}$$

$$(((\text{cluster \#} + 9) * 2) - (\text{track \#} * 9)) = \text{sector}$$

b) To convert from Track and Sector to Clusters:

$$(((\text{track \#} * 9) + \text{sector \#}) - 17) / 2 = \text{cluster \#}$$

A brief explanation:

Data sectors start at Track 2, Sector 1. That means 18 sectors (or 9 clusters) have to be accounted for in the formula. Also there are 2 sectors per cluster so you must multiply by 2 at some point. Here is all there is to it, what cluster is Track 22, Sector 3 ?? I'll put the numbers into the formula.

```
(( ( 22 * 9 ) + 3 ) - 17 ) / 2 = cluster #
(( 198 + 3 ) - 17 ) / 2 = cluster #
( 201 - 17 ) / 2 = cluster #
184 / 2 = cluster #
92 = cluster #
```

If there had been a remainder, it would have been the second sector in the cluster. That's all there is to it, but just so you can practice a little, I included a chart with some of the Clusters marked with the Track and Sector (see fig.4).



## Telecom

### ZMAG SPECIAL REPORT ...Computer Security Act...

Even with the Reagan administration's backing, the House Of Representatives' Computer Security Act of 1987 (HR 145) must still dodge National Security Agency (NSA) opposition, which could affect the outcome when the Senate considers the bill this month.

Awaiting its fate, the measure now sits in the Senate. Although the Senate does not currently have companion legislation to match the House, it could either eventually propose its own bill, make some adjustments to the House bill or adopt the House bill in its entirety.

"Right now, the House bill is being held at the desk," said Ann Harkins, chief counsel for the Senate Committee on technology and the law.

The holdup has given the NSA an opportunity to influence the Senate legislation and industry sources said that the NSA is indeed talking to Senate leaders. The NSA declined comment on the whole subject.

"I assume the NSA will fight it all the way, going through the Senate (to argue its case)," said Donald Peyton, director of government relations for the Information Industry Association (IIA) in Washington D.C. "But based on what we know the bill has a good chance of going through the Senate as is."

The NSA has a vested interest in the bill, which places the National Bureau of Standards (NBS) in charge of computer security standards for "sensitive but unclassified" data in the federal government.

Although the NSA and the Defense Department will remain in charge of Classified data, industry sources said that in the eyes of defense-minded officials, the bill still leaves too much information at the fingertips of the public.

"NSA believes that it should control all of the (sensitive but unclassified) information," said one information provider.

Neither was Jack Simpson, President of Mead Data Central Inc. of Dayton, Ohio, sure that the Computer Security Act would smooth ruffled defense establishment feathers. "It's a temporary victory but nothing has been resolved (yet)," he said.

The Defense department started studying data flow in early 1986, when the Air Force dispatched its AFMAG (Air force Management Advisory Group) to check into private industry database services. It was then that Dialog received a visit from AFMAG.

For some other database companies, a visit from Uncle Sam was not so pleasant. Mead Data met AFMAG, FBI and the NSA representatives on various occasions.

At that time, Simpson said, the NSA was "most interested in patents and Nexis" information availability. "They wanted to know how our system worked, who our customers were, and if we could monitor (customer access) and if we could stop (some customers) from accessing some data," Simpson explained.

According to Simpson, these visits as well as visits to other database companies such as CompuServe; EIC Intelligence in N.Y., Chemical Abstract, Columbus, Ohio; and Digital Information Group, Stamford Conn., were all part of a plan to implement restrictions on data availability. Hence the National Telecommunications Information Systems and Security (NTISS) Policy Directive No. 2 issued by former national security adviser Adm. John Poindexter in late 1986.

Mead Data's federal guests weren't happy with its National Technical Information Service (NTIS) database, which comes from Department of Commerce public-domain information. As it was, Mead's NTIS offering was not faring well commercially, so the company deleted it from its database in February of this year. "We hoped that would settle this whole issue," Simpson added.

Opponents of the bill argue the "puzzle pieces" theory, where foreign intelligence or domestic hackers could take bits of publicly available data and pull together strategic information that as a sum of its parts could be considered classified.





# FUNSTUFF

COMPUTER QUIZ  
By Guy A. Hurt (C.H.A.O.S.)

Below, on the left, are a list of computer (or data processing) items. On the right, is a list of potential definitions for these items. Your mission is to match the terms up with their definitions. More than one term may match up with the same definition, while some items may not have a definition listed. In that event, you may want to use "NO DEFINITION LISTED". Good luck. Answers are included in this issue.

- |                     |                                                                            |
|---------------------|----------------------------------------------------------------------------|
| A. ADA              | 1. computer language                                                       |
| B. analog computer  | 2. data line that transmits in only one direction                          |
| C. APL              | 3. device that handles numbers by counting                                 |
| D. BNF              | 4. device that handles numbers by representing them as physical quantities |
| E. CRC              | 5. first electronic digital computer                                       |
| F. diamond          | 6. first IBM computer                                                      |
| G. digital computer | 7. flowchart symbol for decisions                                          |
| H. ENIAC            | 8. flowchart symbol for I/O                                                |
| I. microsecond      | 9. flowchart symbol for processes                                          |
| J. millisecond      | 10. formal notation for defining syntax                                    |
| K. nanosecond       | 11. method for checking errors                                             |
| L. parallel         | 12. modify a memory location                                               |
| M. parallelogram    | 13. 1 billionth of a second                                                |
| N. peek             | 14. 1 millionth of a second                                                |
| O. rectangle        | 15. 1 thousandth of a second                                               |
| P. serial           | 16. special kind of linked list                                            |
| Q. simplex          | 17. squaring function                                                      |
| R. SQR              | 18. transmitting a series of bits, one at a time                           |
| S. tree             | 19. transmitting a series of bits at a time                                |
| T. UNIVAC           | 20. NO DEFINITION LISTED                                                   |

P-18 Q-2 R-20 S-16 T-20

I-14 J-15 K-13 L-19 M-8 N-20 O-9

A-1 B-4 C-1 D-10 E-11 F-7 G-3 H-5

ANSWERS



# Programming

C Language Course Lesson 1:  
The Nature of C  
July 11/86 by "R.S."

(Editor's note: this series of lessons were uploaded to the CHAOS BBS for use in the magazine but without explanation of who "R.S." was... I hope the author will contact me with more information!)

Welcome to the wonderful world of C. In this course, I will attempt to make you familiar enough with C so you can write your own programs and understand others.

Learning C is not going to be a "walk in the park." What C gives you is a great amount of power over the machine at all levels with the flexibility to match. But you must put the effort into learning it properly. C should not be attempted by people unfamiliar with machine language and/or low-level machine structures.

Computer languages are basically divided into two main categories, languages that are interpreted, and languages that are compiled. An interpreter is a program (usually in ROM) that takes each item in the source file and decodes (interprets) it. The machine instructions are created as needed, line by line until the end of the source file. As a result of this, each time you want to execute a program, the interpreter must also be in memory. A compiler, on the other hand, takes the entire source file and translates it creating an executable program; therefore, the language does not have to be in memory since the executable program consists of the necessary machine language instructions. Each method has its own advantages and disadvantages. Interpreted programs are easier to change and re-execute, but are generally much slower than compiled programs. Compiled programs, on the other hand, are harder to change since they must be re-compiled each time even when a little change is made.

## The C Programming Environment

We will first examine the process which transforms C language programs into executable machine code programs. The process has several distinct phases: program creation using an editor, compilation, linkage editing, and debugging. You can visualize the process like this:

KEYBOARD-->EDITOR-->C SOURCE FILE

SOURCE FILE-->COMPILER-->OBJECT MODULE

OBJECT MODULE 1--->LINKER<---OBJECT MODULE N

RESULT: EXECUTABLE FILE

Most C compiler packages include a text editor, the compiler, linker, and a manager commonly referred to as a shell.

The function of the shell is to coordinate all the necessary steps for C program development. Through it you can edit a program, then invoke the compiler, and finally, the linker.

## The C Preprocessor

The compilation itself can be subdivided into two steps: a preprocessing step and a compilation step. The C preprocessor is a very useful and often-used feature of the C language. Because of its usefulness, we'll discuss some of its features now.

The C preprocessor lets numbers, characters, and strings to be defined symbolically. That is, you can define a symbol (or token) to represent the number, character, or string, and then use the token throughout the program. Because the token is defined only once, its value can be changed throughout a program be changing only one statement. Further, if the token has a descriptive name, your program will be more readable and easier to maintain.

Symbolic constants are defined by using the preprocessor statement #define. Unlike regular C statements, preprocessor statements are required to begin in column 1 of the source line. For example:

```
#define PI 3.141593
```

The preprocessor performs a token replacement on the source file. That is, wherever the token PI is used in the source file, the token PI is replaced by the characters 3.141593. It is a C programming convention that all symbolic preprocessor definitions be in upper case only.

This is not absolutely required, but highly suggested. It is also suggested that all #define statements be at the top of the program.

The second form of the #define preprocessor statement is one in which you can define a macro as a token. The macro can contain any valid C statement; for example, suppose you wanted to define a token to represent a formula, like this:

```
#define FORM a * 16.3 + 12
```

This is very handy when you have to repeatedly execute a C statement.



The following table lists all the simple C data types.

char  
float  
int  
double  
unsigned  
pointer  
long  
short

Unsigned, long, and short are just different variations of the basic integer (int). The next table identifies the nature of each data type, and the minimum and maximum values.

char - a single byte representing an ASCII character in apostrophes, where the character  $\geq -128$  and  $\leq 127$ .

int - an integer, where the value is  $\geq -32768$  and  $\leq 32767$ .

unsigned int - an unsigned integer, where the value is  $\geq 0$  and  $\leq 65535$ .

long int - an integer, where the value is  $\geq -2147483648$  and  $\leq 2147483647$ .

short int - an integer, where the value range is the same as the basic int data type.

float - a floating point number, where the value is  $\geq 10E-39$  and  $\leq 10E38$  with 6 digits of accuracy.

double - a floating point number, where the value range is the same as the float data type, with 14 digits of accuracy.

pointer - an unsigned int or a long capable of representing any memory address at which data may be stored.

Some differences exist in these specifications depending on the compiler you are using. The environment for which a program is written should be considered when determining what data can go into which variables and constants. Caution should always be applied to assignments between pointers and ints or longs. Depending on the compiler implementation, you may get unexpected results; always check the compiler documentation.

#### Exercises

After having your first lesson, you should be able to answer these questions correctly.

1. What is an escape sequence.

2. Identify which variable/constant name are valid:

a) tt12  
b) 16st  
c) long\_variable  
d) \_sample  
e) TEmP  
f) say.what  
g) test-variable  
h) page/counter

3. What output will this program produce:

```
main() { /* Trace the output of this program
```

```
printf("This program demonstrates"); printf("an  
important point\n"); */ }
```

4. Specify the data type of the following:

a) 42690  
b) 'b'  
c) -1  
d) 23.0  
e) -128  
f) 32

This lesson has covered the basic C environment, data name and variable rules, variable types, and introduced you to C functions. In the next lesson, we will deal with arithmetic operators, relational operators, some more on functions (including printf), and Boolean logic.

Hope to see you next month.



## Programs

#### KEYBOARD DEFINER

by F. Van Gilst, Atari User 12/86  
Reprint from PAGE SIX Vol. 4, No. 11

This five line program lets you modify the keyboard definition table and adds five useful edit functions. Type in the program listing and SAVE it. Press RESET then RUN the program. Keyboard Definer only runs on the XL/XE series computers.

#### HOW TO USE IT

Run the program. Press the key that you wish to re-define. The program responds with the prompt, "GIVE CHARACTER". Now, type in the character you wish to store for the selected

key. The program sets up that key with the new character. For example, you could press SHIFT-SPACE and enter a semi-colon when prompted. Every time you press SHIFT-SPACE, you'll get a semi-colon on the screen. The program also adds five bonus screen editing functions:

- CTRL-4 Moves the cursor to the top left of the screen.
- CTRL-5 Moves the cursor to the lower left of the screen.
- CTRL-6 Moves the cursor to the left of the current line.
- CTRL-7 Moves the cursor to the right of the current line.
- CTRL-8 Toggles the keyboard click either on or off.

You may also save your current re-defined keys by running DOS and saving an area of memory to a file by selecting the BINARY SAVE option ('K' in Atari Dos 2.0 and 2.5) and entering this command:

```
D:KEYDEF.BIN,600,6C9,600
```

To reload the newly defined table, just use the BINARY LOAD and enter the file name.

#### LINE BREAKDOWN

- 1: Contains the data for the program itself.
- 2: Poke's in the data and opens a channel to the keyboard.
- 3: Waits for a key to be pressed.
- 4: Inputs a replacement character.
- 5: Replaces the character with the new one one into the table.

#### PROGRAM LISTING

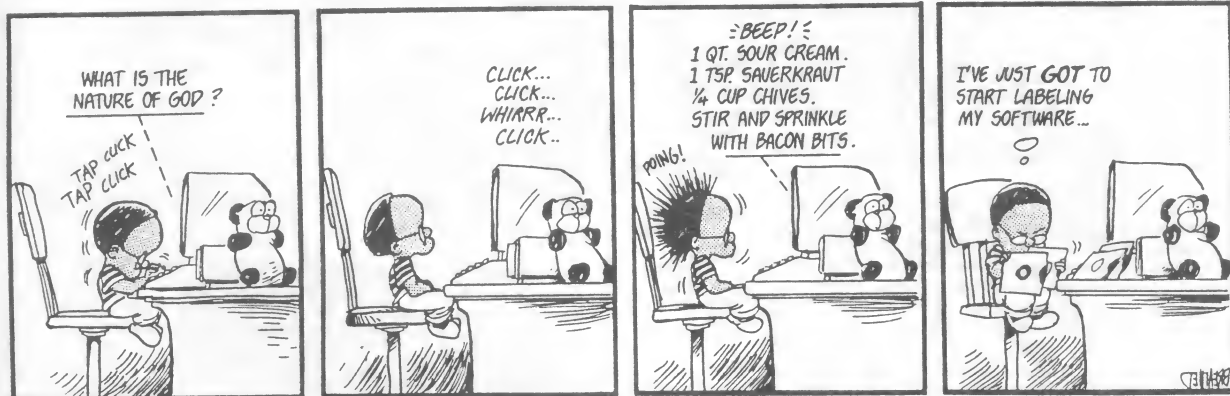
```
1 DATA 104,160,191,177,121,153,9,6,136,192,
  255,208,246,96,1697,142,1700,144,1702,
  143,1724,145,1726,137,169,9,133
2 FOR L=1738 TO 1751:READ B:POKE L,B:NEXT L:
  X=USR(1738):OPEN #1,40,"K":FOR L=1 TO 5:
  READ A,B:NEXT L
3 A=PEEK(764):IF A=255 THEN 3
4 POKE 764,255:? "GIVE CHARACTER":GET #1,K:
  POKE 1545+A,K:POKE 764,255:GOTO 3+2*(K=155)
5 POKE 121,9:POKE 122,6:FOR L=1536 TO 1544:
  READ B:POKE L,B:NEXT L:CLOSE #1:END:DATA
  121,169,6,133,122,96.
```

|||||

BLOOM COUNTY

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## Last Hacks

Your Computer & Monsters..Uh..Kids  
By Curtis Eddington  
Reprinted from North Central Oklahoma  
ATARI Users Group Newsletter

Summer time is always a slack time for any indoor activity, with the possible exception of afternoon naps. I have found, however, that the computer does serve a couple of purposes in those slow months, in fact, I find it almost indispensable. At this minute, my house is occupied by one of my son's more obnoxious friends. Were it not for the computer, I would probably be a resident of the local municipal jail. This computer has been in their capable hands for the last 3 hours, guaranteeing me at least some respite from their normal levels of mayhem and destruction. Research shows:

1 Kids: this is optimum. He will sit for hours, never moving from his chair. An adolescent would urinate on himself rather than stop in the middle of a video game.

2 Kids: this works well also... for around 1/2 an hour, or until one child shows a clear advantage over the other. At that point the disadvantaged player will attempt to equalize the contest in a progressive manner:

1) He will interfere with the other child's control of his joystick, such as bump the stick or mashing his fire button at the wrong time. If this doesn't stop the advantaged child, then:

2) Let child "1" get a sizable lead, then physically wrest his joystick from his hands, hand his joystick to the robbed player, and proceed to claim victory, usually in a very loud voice (this is the first clue that your computer is failing its job as a babysitter). If child "1" is not flustered by this and continues to claim victory, then:

3) At the optimum moment, reach over and unplug the good players joystick from the computer, insuring at least momentary advantage. This often leads to much yelling and crying and sometimes fist fights. If player one refuses to be panicked by this and still beats player 2, then:

4) Every time player 2 falls behind, he reaches over and restarts the game. Now, I would have thought that this particular item would fall much earlier in the list, since this

is the one I employ when I'm outmatched (some people never grow up), but that is not the case. At this point, your computer has dismally failed its purpose, and you have a couple of arguing kids on your hands.

3 (or more) Kids: This will never work. Unless you own an 800, there are only 2 joystick ports on your machine, and there are few games that allow for more than 2 players. Fighting will immediately break out because the kids do NOT understand the concept of sharing for periods of longer than a few minutes. Non-players will begin to badger players to hurry and finish, and the final straw will be confusion over who's turn it is now. The one that will yell the loudest that it is HIS turn is the one who most recently completed his turn!

The most effective way of controlling children with your computer is the "deferred promise". You promise that they can play later: "Can we play some video games?" "No!! Well, maybe, but later, and only if you are really good." You can then use it for the rest of the day, if you are lucky and let the children play for 5 minutes right before bedtime. But let me warn you, the children will quietly gather around your feet, hovering near you like gnats, every few minutes saying "Now?".

Effective use of this babysitting resource can be done by following a few simple rules.

1) Never let it get stale. If you see their attention begin to wander, run them off the machine and tell them they are playing it too much. Despite the fact that they were getting bored with it, those simple words will make using the computer the single most important thing in their lives!

2) Be ruthless! The minute you see an argument, dissention, verbal or physical abuse or even full contact warfare among the kids, tell them, "One more peep or problem outta you kids and I'm gonna set that %&@!# computer, AND YOU, on FIRE!"

3) Keep your promises. If you hear "one more peep or problem", then set 'em on fire! And, if you promise to let them play if they are good, and through some freak accident, like all of them passing out because of a toxic chemical spill, they ARE good, then be sure and let them play the computer.

Except for a few charred spots in the front yard where I can't get grass to grow, I have found these rules to be quite effective. And practice the "promise" concept this summer because this fall it could prove to be very valuable, transforming your babysitter into an educational tool: "Do well on your homework and I'll let you play the computer!"



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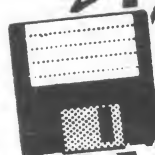


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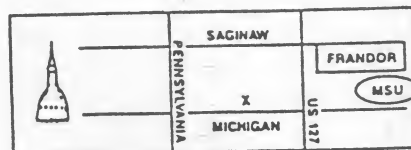
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